Michigan Department of Consumer & Industry Services
Bureau of Construction Codes

BULLETIN

Volume 5, Issue 2 February 2000

DIRECTOR'S COLUMN

Henry L. Green

Over the past year, we have experienced two events that have involved high pressure boilers. Each of these accidents have been investigated and the results indicate the boiler performed within specified safety factors.

In each case the pressure boundaries of the boiler remained intact. While the specific cause in each accident has yet to be determined, we can be assured the safety measures established for boiler construction, installation and operation have proven to be appropriate for the protection of building occupants and users.

Michigan has a long standing safety record in the construction field, and boiler construction and installations are no exception. Over the years, refinements have occurred that have provided for the acceptance of new innovative products in the boiler industry. As with all elements of construction, boilers used in the electrical generation, manufacturing processes, heating systems, or for providing hot water, must be inspected upon installation. Periodic inspections, after installation, to assure the on-going safety of the protection devices designed and installed for the safe operation of the boiler is essential. Without these periodic inspections and on-going maintenance, more catastrophic incidents may occur causing injury to persons and

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State Construction Code Act

On December 28, 1999, Governor Engler signed into law Public Act 245 of 1999. The most significant provision of this bill amends the State Construction Code Act to set in place a single set of construction standards applicable statewide. The Act calls for the adoption of the International Building, Mechanical and Plumbing Code and the National Electrical Code as the State Codes.

Local communities will no longer be permitted to amend codes. The statute does provide for amendments based on local conditions. As reported in the November 1999 edition of this publication, a review of ordinances submitted to the Commission for approval over an 18 month period included only three technical amendments and those contained in the State Electrical Code and by Reciprocal Electrical Council member communities.

As codes are updated after October 15, 1999, by the Department, they become the codes in effect throughout the State. The Electrical Code was updated on December 6, 1999, making it the first of the codes to become effective within every jurisdiction in the state.

Other provisions of the Amendatory Act include:

1. An exemption for all agricultural buildings used for agricultural purposes on the land on which the building is located if it is not used in the business of retail trade.
2. Common stair tread and riser dimensions. Until the building code is updated, this section of the law calls for the application of 8 1/4 inch risers and 9 inch treads in all one- and two-family dwellings and within apartments statewide.
3. Until the adoption of the new state building, mechanical, and plumbing codes, appeal decisions rendered by local construction boards of appeals in jurisdictions who use codes other than the state code may appeal to the Construction Code Commission.
4. Fees generated for application of construction codes may only be used for that purpose.
5. Permit application forms have been revised to include new language. These forms were provided to local units of government for use.

Once the entire series of codes, building, mechanical and plumbing have been updated, certain provisions of the Act including sections 2, 3, 8, 9, and 9a will be repealed. These sections are replaced with new sections that reflect the enforcement of a single state code.

Notice of the changes in the Act have been provided to elected officials and to all registered code officials. Additional information may be obtained by contacting the Bureau of Construction Codes at (517) 241-9302.

Director's Column, continued...

buildings.

The ASME Boiler and Pressure Vessel Code, which is adopted by the State, provides requirements for the construction and installation of boilers. The State boiler rules provide for the initial and on-going inspection of boilers. These rules, in conjunction with the National Board Inspection Code, provides inspection criteria for all inspectors. The National Board of Boiler and Pressure Vessel Inspectors is an organization which provides a vehicle for input from boiler inspectors throughout the United States to develop consistent safety standards for boiler construction, installation and operation.

BCC Web Site

The Bureau is continuing to update and improve its web site (www.cis.state.mi.us/bcc). The Statewide Jurisdiction Listing and the Proposed Code Change Process information have been added, exam schedules and board meetings have been updated, bureau inspector training program schedules have been added, and forms have been revised for easier downloading.

Any questions or comments may be directed to bccinfo@cis.state.mi.us.

BULLETIN
BUREAU OF CONSTRUCTION CODES
MICHIGAN DEPARTMENT OF CONSUMER & INDUSTRY SERVICES

The BULLETIN is a quarterly publication of the Bureau of Construction Codes within the Michigan Department of Consumer & Industry Services. The BULLETIN is published for the information of the 46,000 plumbers, electricians, mechanical contractors, boiler and elevator licensees, plan reviewers, building officials, and inspector registrants throughout the state.

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Elevator Chief and Assistant Chief Appointments

As a result of the retirements of the former elevator chief and assistant chief, Calvin Rogler has been appointed to the position of Chief of the Elevator Safety Division and Robert Babinski has been appointed to the position of Assistant Chief.

Cal Rogler brings approximately 24 years of elevator trade experience to his new position. Cal's background experience consists of elevator construction and installation together with experience in repair and service. Cal has been an inspector with the bureau for approximately six years. He possesses approximately 30 years of total experience in the elevator industry. Please join the bureau in welcoming Cal Rogler to his new position.

Robert Babinski brings approximately 13 years of elevator trade experience to his new position. Bob's background consists of a combination of repair, installation, maintenance, and adjusting experience. Bob has been an inspector with the bureau for approximately 10 years. He possesses approximately 23 years of total experience in the elevator industry. Please join the bureau in welcoming Bob Babinski to his new position.

Combustion Air

by Tennison B. Barry

The purpose of combustion air is so that appliances have enough oxygen for the complete combustion of fuel, dilution of flue gases, and ventilation of the equipment or appliance and the space in which it is installed.

Chapter 7 on combustion air is a chapter that requires careful review to assure proper enforcement. You may see installers doing things that may not look familiar. Before rejecting the installation, consider two approaches: (1) Ask the installer what it is that he/she is doing and which section of Chapter 7 does the installation comply with. (2) Review Chapter 7 to see if the installation is in compliance with any portion of the chapter. Do not assume that the installation is in violation of the code.

There are at least eight different ways to supply combustion air to equipment.

1. Section 702. All air supplied from inside the structure. When using this method the building must be of loose construction.
2. Section 703. All air supplied from outside the structure through two openings. When using this method the building is of unusually tight construction. This is the traditional method of installing combustion air.
3. Section 704. All air supplied from outdoors through one opening. When using this method all appliances must be gas-fired.
4. Section 705. Combination of both indoor and outdoor air in building condition 1. When using this method the building must be of loose construction.
5. Section 706. Combination of both indoor and outdoor air in building condition 2. When using this method the building is of unusually tight construction and the equipment is located in an area that meets the volumetric requirements of section 702.2.
6. Section 707. When all combustion air and dilution air is provided by mechanical forced-air system.
7. Section 708. When the appliance is listed and labeled for a direct combustion air connection to the outdoors.
8. Other approved, engineered methods employing the principles of the above methods.

Questions regarding combustion air may be directed to the Mechanical Division at (517) 241-9325.

Expansion Tanks
by Bryan Jorgensen

In accordance with the Boiler Act of 1965, P.A. 290, expansion tanks are required on hot water heating boilers and may be used on hot water supply boilers.

Since these tanks are used on low pressure boilers, the code of jurisdiction is Section IV of the ASME Codes. Section IV requires that any system exceeding 30 psi relief valve setting must use an expansion tank built to the ASME Code Section VIII, Div. 1 or Section X as does the Michigan Boiler Law and Rules.

While Section VIII, Div 1 does not require tanks under certain sizes to be built to this code (this might include a tank the size of an expansion tank), Section VIII, Div. 1 can not be made to exempt a requirement of another section of the code. Thus it is inaccurate to state that due to the size of an expansion tank it need not be built to the code.

The bottom line is that if it is being installed on a hot water heating boiler or a hot water supply boiler that exceeds 30 psi relief valve setting, the expansion tank must be built to the ASME Code. Questions may be referred to the Boiler Division at (517) 241-9334.

Scheduled Board Meetings

MEETING	DATE	TIME	LOCATION
Electrical Administrative Board	February 18	9:30 a.m.	Okemos-Conf. Room 1
Board of Mechanical Rules	February 23	9:00 a.m.	Okemos-Conf. Room 3
Construction Code Commission	March 1	9:30 a.m.	CANCELLED
Board of Boiler Rules	March 7	9:30 a.m.	Okemos-Conf. Room 1
Barrier Free Design Board	March 10	9:30 a.m.	Okemos-Conf. Room 1
Elevator Safety Board	March 10	9:30 a.m.	Okemos-Conf. Room 3
State Plumbing Board	March 21	10:00 a.m.	Okemos-Conf. Room 1
Electrical Administrative Board	April 20	9:30 a.m.	Okemos-Conf. Room 1
Board of Mechanical Rules	April 26	9:00 a.m.	Okemos-Conf. Room 3
State Plumbing Board	April 26	10:00 a.m.	Okemos-Conf. Room 1
Construction Code Commission	May 3	9:30 a.m.	Okemos-Conf. Room 3
Barrier Free Design Board	May 12	9:30 a.m.	Okemos-Conf. Room 1
Elevator Safety Board	May 19	9:30 a.m.	Okemos-Conf. Room 3

Okemos = 2501 Woodlake Circle, 2nd floor, Okemos, MI

License Exam Schedule

EXAM	DATE	LOCATION	DEADLINE
Elevator Contractor & Certificate-of-Competency Exam	March 10	Okemos	February 21
Plumbing Exam	March 22	East Lansing	March 3
Electrical Exam	March 28/29	Lansing	February 29
Elevator Journeyperson Exam	April 19	Okemos	March 31
Elevator Contractor & Certificate-of-Competency Exam	May 19	Okemos	May 1
Electrical Exam	May 31	Escanaba	May 2
Boiler National Board Exam	June 7/8	Okemos	May 8
Boiler Installer/Repairer Exam	June 7/8	Okemos	May 12
Mechanical Contractor Exam	June 13	Lansing	May 16
Electrical Exam	June 21/22	Lansing	May 23

Dates and locations are subject to change.

Permanent Telephone Connections in Elevators
by Calvin W. Rogler

ASME A17.1a -1994, Section 211, requires a means of two-way conversation between the car and a readily accessible point outside the hoistway which is available to emergency personnel (telephone, etc.).

It has been brought to the attention of the department that at the time of final inspection of an elevator, some contractors are allowing the elevator car telephone to be connected to a temporary or construction telephone line. The resulting situation is that at the time these telephone lines are removed and replaced with permanent telephone lines, the elevator car telephone is not reconnected. Many times this condition exists until the state elevator inspector's next annual inspection. This creates a violation of the code. The consequence of the code violation would be that anyone trapped in the elevator would not have the means to summon assistance. We are finding this is happening more and more often. For this reason, as of March 1, 2000, **only elevator car telephones attached to permanent telephone lines will be accepted.**

Questions regarding this requirement may be directed to the Elevator Safety Division at (517) 241-9337.

REMINDER: Safety programs are available for elevator and escalator safety through the Elevator Escalator Safety Foundation, P.O. Box 6273, Mobile, AL 36660-0273, 1-800-949-6442.

Permit Application Fee Non-Refundable

A change in the Permit Fee Schedules for Electrical, Mechanical, and Plumbing Permits took effect January 3, 2000. The revised fee schedules make the Application Fee of $30.00 non-refundable. This is to cover the cost of processing the required paper work.

To avoid incurring this cost please make sure before submitting a permit application that the job is yours, the application is not a duplicate application, and the job location is within state jurisdiction. The Statewide Jurisdiction Listing can now be found on the bureau's web site at www.cis.state.mi.us/bcc.

Detailed Medical Gas Piping Procedures

by Robert J. Konyndyk

The Plumbing Division in its last Bulletin article provided general information regarding its efforts in conducting code enforcement for medical gas piping inspections. The purpose of this article is to provide greater detail on those procedures due to numerous requests.

Procedures for inspections are addressed in the following outline methodology.

I. Installation contractor makes application for a plumbing permit prior to the installation of any medical gas piping.
   Note: The Bureau of Construction Codes will only conduct inspections in those areas currently in their enforcement jurisdiction.

II. Upon receipt of a permit, ***construction*** may begin in conformance to NFPA 99c, 1996 edition.

III. The ***installer should be certified*** by a recognized third party certifier.
   Note: The American Society of Sanitary Engineering, Series 6000, Professional Qualifications for Medical Gas Systems Installers, Inspectors and Verifiers provides excellent guidelines on professional qualifications.

   A. Installers using brazing procedures qualified by a technically competent group or agency are permitted when compliance is demonstrated to the standard, section 4-3.1.2.3(b) 1.
      i. In addition Brazing Procedure Specifications ***(BPS)***, Brazing Procedure Qualification Records ***(BPQR)***, and each installer shall have Brazer Performance Qualification test records ***(BPQ)***.
      ii. The ***employer shall sign and date*** these records, thereby accepting responsibility for the qualifications and installation.
      Note: While the procedures and specifications may be used from either Section IX, Welding and Brazing Qualifications, of the ASME Boiler and Pressure Vessel Code, or AWS B2.2, Standard for Brazing Procedure and Performance Qualifications both shall additionally address cleaning, joint clearance, overlap, internal purge gas, purge gas flow rate and filler metal. Additionally, Copper Development Association has an excellent sample form.

IV. The installer shall request an ***inspection*** prior to the closing of any walls. During the inspection the inspector will perform the following:
   A. Review the as-built plans and inspect the piping for conformance to the standard.
   B. Confirm that all installers conformed to section III. A. of this outline.
   C. Confirm that a blow-down test was conducted and witnessed by authorized hospital personnel.
   D. Confirm that a cross connection test was conducted and witnessed by authorized hospital personnel.
   E. Witness an initial pressure test conducted by the installer.
   F. The installer shall ***provide the following documentation*** to the inspector:
      i. Cleaned and bagged fitting receipts.
      ii. Cleaned and capped pipe receipts.
      iii. Oil free dry nitrogen for purge receipts.
      iv. Brazing rod material receipts.

V. The installer shall request a ***final inspection*** prior to the use of the facility. During the inspection the inspector will perform the following:
   A. Confirm that all five installer tests were conducted and witnessed by authorized hospital personnel.
   B. Obtain a copy and review the verifier's report for facility conformance.

VI. The inspector shall assemble documentation and data for record keeping.

Questions regarding this issue may be directed to the Plumbing Division at (517) 241-9330.

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